

## REMARKS

The Office Action dated July 9, 2004, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 9 and 11 are amended to more particularly point out and distinctly claim the subject matter of the invention. New claim 12 is submitted. No new matter has been added. Support for the amendments may be found throughout the specification and in Figure 2. Thus, claims 2-7 and 9-12 presently are pending in the application, and are respectfully submitted for consideration.

Claim 11 was rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended claim 11 accordingly. Thus, the rejection is rendered moot. Applicants respectfully request that the indefiniteness rejection be withdrawn.

Claims 2-5, 7 and 9-11 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,157,614 (*Pasternak et al.*). The Office Action took the position that *Pasternak* taught each and every element of claims 2-5, 7 and 9-11. Applicants submit that the cited reference does not disclose or suggest all the features of any of the presently pending claims. Thus, the claims are not anticipated by *Pasternak*.

Claim 9, upon which claims 2-5, 7 and 10 are dependent, recites a method for controlling transmission resources of a radio access network adapted to transmit data

packets and real time traffic and in non-real time traffic. The method includes obtaining information related to transmission resources required for handling real time traffic in a radio network controller. The method also includes reserving transmission resources for handling non-real time traffic dynamically based on a knowledge of overall or variable transmission resources of a radio transceiver device of the radio access network and the information related to the transmission resources required for handling real time traffic by the radio transceiver. The respectively allocated reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers.

Claim 11 recites a radio access network control device configured to obtain information related to transmission resources required for handling real time traffic in a radio network controller. The radio access network control device also is configured to reserve transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources of a radio transceiver device of the radio access network and the information related to the transmission resources required for handling real time traffic by the radio transceiver. The respectively allocated reserve transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers.

As discussed in the specification, examples of the present invention enable an allocation/partition of physical resources to be repeatedly performed after each update of a resource partitioning. Due to dynamic, or repeatedly performed, resource allocation and partitioning between real time and non-real time traffic, physical resources do not

remain unused and thus do not unnecessarily limit the maximum possible traffic amount handled by the network. Thus, resource allocation/partition is performed dynamically and is dependent on the traffic. It is respectfully submitted that the cited reference of *Pasternak* fails to disclose or suggest the elements of any of the presently pending claims. Therefore, the cited reference fails to provide the critical and unobvious advantages discussed above.

*Pasternak* relates to a wireless ATM network with high quality of service scheduling. *Pasternak* describes an ATM access network that includes subscriber terminals located in several buildings and a base station located within a few kilometers of the subscriber terminals. Each subscriber terminal is connected to a plurality of user interfaces. Traffic flow scheduling includes requesting grants that include virtual circuit information, in which a virtual circuit represents a virtual path identifier/virtual channel identifier of an ATM cell's flow. A request-based core virtual circuit scheduler resides at the base station, known as a virtual shaper. If the service of a particular virtual circuit is at a constant bit rate or requires critical real time performance, then a base station scheduler called a virtual framer provokes periodical request-less grants to the virtual circuit. Further, *Pasternak* describes the virtual framer providing a scheduling mechanism that is useful for constant and real time variable bit rate traffic. Real time bit rate traffic is served by the virtual framer using periodic grants, and if the subscriber terminal virtual circuit has no traffic, then the subscriber terminal transmits idle cells. *Pasternak*, however, does not disclose or suggest the feature of reserving transmission

resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources of a radio transceiver device of a radio access network and the information related to the transmission resources required for handling real time traffic by the radio transceiver.

In contrast, claim 9 recites "reserving transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources of a radio transceiver device of said radio access network and the information related to the transmission resources required for handling real time traffic by said radio transceiver." Claim 11 recites some similar features, but is directed to a radio access network control device. Applicants submit that *Pasternak* does not disclose or suggest at least these features of the presently pending claims.

Applicants submit that the scheduling of *Pasternak* focuses on determining the sequence in which packets are transmitted, for example, determining who is allowed to transmit at which point in time. This aspect of *Pasternak* does not disclose or suggest the features discussed above. According to *Pasternak*, scheduling takes place within resources reserved for a specific type of traffic, and scheduling is independent from resource allocation. The scheduling for constant bit rate traffic and real time variable bit rate traffic does not disclose or suggest reserving transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources of a radio transceiver device and the information related to the transmission resources required for handling real time traffic by a radio transceiver.

As noted in *Pasternak*, real time variable bit rate traffic is served by a virtual framer using periodic grants, and if the subscriber terminal virtual circuit has no traffic, the subscriber terminal transmits idle cells. Thus, the packets of *Pasternak* to be transmitted in either real time or non-real time still need respective channel activation and/or deactivation procedures. Such procedures are, however, time consuming and cause a drawback for the data packet allocation functionality in CDMA and/or WCDMA systems. *Pasternak* describes a scheduling process that relies on slow common control channels on interfaces in the access network. Due to the beforehand division of channels into real time and non-real time channels, the physical resources described in *Pasternak* remain unused by sending idle traffic which limits the maximum possible traffic amount handled by a network. Thus, *Pasternak* does not disclose or suggest observing transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources of a radio transceiver device and the information related to the transmission resources required for handling real time traffic by the radio transceiver.

Applicants also submit that *Pasternak* does not disclose or suggest specifying that information related to transmission resources required for handling real time traffic is obtained, and furthermore, that respectively allocated reserve transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers. As noted above, the virtual path identifiers and virtual channel identifiers may be used for resource allocation/partition between real time and non-real time traffic. The pending

claims recite reserving transmission resources for handling non-real time traffic dynamically based on a knowledge of overall available transmission resources and the information related to the transmission resources required for handling real time traffic.

*Pasternak* does not disclose or suggest any dynamical partition/allocation of resources between real time and non-real time traffic. Instead, *Pasternak* describes that if the subscriber terminal virtual circuit has no traffic, the subscriber terminal transmits idle cells. Thus, the resources of *Pasternak* are not reallocated but, once allocated, they remain allocated in the network. Applicants submit that the idle cells are useless cells that are nevertheless transmitted as described in *Pasternak*. The transmission of idle cells creates an artificial use of allocated resources. Thus, physical resources are wasted in the described arrangement of *Pasternak*. Applicants submit that *Pasternak* does not disclose or suggest specifying that information related to transmission resources required for handling real time traffic is obtained in a radio network controller and that respectively allocated reserve transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers.

Applicants also submit that *Pasternak* does not disclose or suggest obtaining information related to transmission resources required for handling real time traffic in a radio network controller. Referring to Figures 1 and 2 of *Pasternak*, scheduling mechanisms are described that are to be used in wireless ATM networks. Some of the virtual channels of *Pasternak* can carry real time traffic. This aspect of *Pasternak*, however, does not disclose or suggest obtaining information related to transmission

resources required for handling real time traffic. Thus, applicants submit that *Pasternak* does not disclose or suggest at least these features of any of claims 2-5, 7 and 9-11. Applicants respectfully request that the anticipation rejection be withdrawn.

Claim 6 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Pasternak*. The Office Action took the position that *Pasternak* disclosed all the features of claim 6 except "said update condition resides in that a predetermined time of day is reached." The Office Action then took the position that it would have been obvious "to perform an update at a predetermined time of day in order to synchronize the network and coordinate status and databases for the network." Applicants submit that *Pasternak* does not disclose or suggest all the features of claim 6.

Claim 6 depends from independent claim 9. Claim 9 is summarized above.

As discussed above, *Pasternak* does not disclose or suggest all the features of independent claim 9. Because claim 6 depends directly or indirectly from claim 9, then claim 6 is not rendered obvious in view of *Pasternak*. If an independent claim is not obvious, then any claim depending therefrom also is not obvious (see MPEP 2143.03). Further, claim 6 recites subject matter in addition to that of independent claim 9, and applicants submit this subject matter is not disclosed or suggested by the teachings of *Pasternak*. Thus, applicants respectfully request that the obviousness rejection of claim 6 be withdrawn.

It is further submitted that each of claims 2-7 and 9-11 recite subject matter that is neither disclosed nor suggested by the cited reference. In addition, new claim 12 recites

some of the features discussed above and is allowable at least for the same reasons. It is therefore respectfully requested that all of claims 2-7 and 9-12 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



William F. Nixon  
Registration No. 44,262

**Customer No. 32294**  
SQUIRE, SANDERS & DEMPSEY LLP  
14<sup>TH</sup> Floor  
8000 Towers Crescent Drive  
Tysons Corner, Virginia 22182-2700  
Telephone: 703-720-7800  
Fax: 703-720-7802

WFN:cct